1,浏览记录存储结构说明

- 设计思路:
    - 保存用户浏览记录: 选取的redis
    - 选用redis的数据类型: list

2,redis补充

- 目的: 能够使用hash,list,set类型做数据的增删改查
- hash: hset, hget, hgetall, hincrby, hdel
    - hset: 设置
    - hget; 获取
    - hgetall: 获取所有数据,键值对格式
    - hincrby: 累加,或者新增
    - hdel: 删除
- list: lpush, lrange, lrem, ltrim
    - lpush : 推入数据
    - lrange: 获取数据
    - lrem: 删除数据
        - lrem key count value
            - count: 为0, 删全部value
            - count: 为负数, 从后面开始删value
            - count: 为正数, 从前面开始删value
    - ltrim: 截取
- set: sadd, smembers, srem
    - sadd: 添加数据
    - smembers: 获取数据
    - srem: 删除数据

3,保存浏览记录

- 目的: 保存用户的浏览记录到redis中
- 操作流程:
    - 1, 子路由

```
url(r'^browse_histories/$',views.UserBrowserHistoryView.as_view()),
```

- 2,类视图

```
class UserBrowserHistoryView(MyLoginRequiredMixinView):
    def post(self,request):
        #1,获取参数
        dict_data = json.loads(request.body.decode())
        sku_id = dict_data.get("sku_id")
        user = request.user

        #2,校验参数
        if not sku_id:
            return http.HttpResponseForbidden("参数不全")

        try:
            sku = SKU.objects.get(id=sku_id)
        except Exception as e:
            return http.HttpResponseForbidden("商品不存在")

        #3,数据入库(redis)
        redis_conn = get_redis_connection("history")
        pipeline = redis_conn.pipeline()

        #3.1 去重

 pipeline.lrem("cart_%s"%user.id,0,sku_id)

        #3.2 存储

 pipeline.lpush("cart_%s"%user.id,sku_id)

        #3.3 截取
```

```
        pipeline.ltrim("cart_%s"%user.id,0,4)
        pipeline.execute()

        #4,返回响应
        return http.JsonResponse({"code":RET.OK,"errmsg":"ok"})
```

- 3,redis配置

```
    "history": {
        "BACKEND": "django_redis.cache.RedisCache",
        "LOCATION": "redis://127.0.0.1:6379/3",
        "OPTIONS": {
            "CLIENT_CLASS": "django_redis.client.DefaultClient",
        }
    },
```

- 4,注意点:

```
var sku_id = {{ sku.id }};
```

4,获取浏览记录

- 目的: 能够获取用户redis中的浏览数据,展示到个人中心
- 操作流程:
  - 1 ,类视图

```
class UserBrowserHistoryView(MyLoginRequiredMixinView):
    def post(self,request):
        ...

    def get(self,request):
```

```python
        #1,获取redis中的数据
        redis_conn = get_redis_connection("history")
        sku_ids = redis_conn.lrange("history_%s"%request.user.id,0,4)

        #2,拼接数据
        sku_list = []
        for sku_id in sku_ids:
            sku = SKU.objects.get(id=sku_id)
            sku_dict = {
                "id":sku.id,
                "default_image_url":sku.default_image_url.url,
                "name":sku.name,
                "price":sku.price,
            }
            sku_list.append(sku_dict)

        #3,返回
        return http.JsonResponse({"skus":sku_list})
```

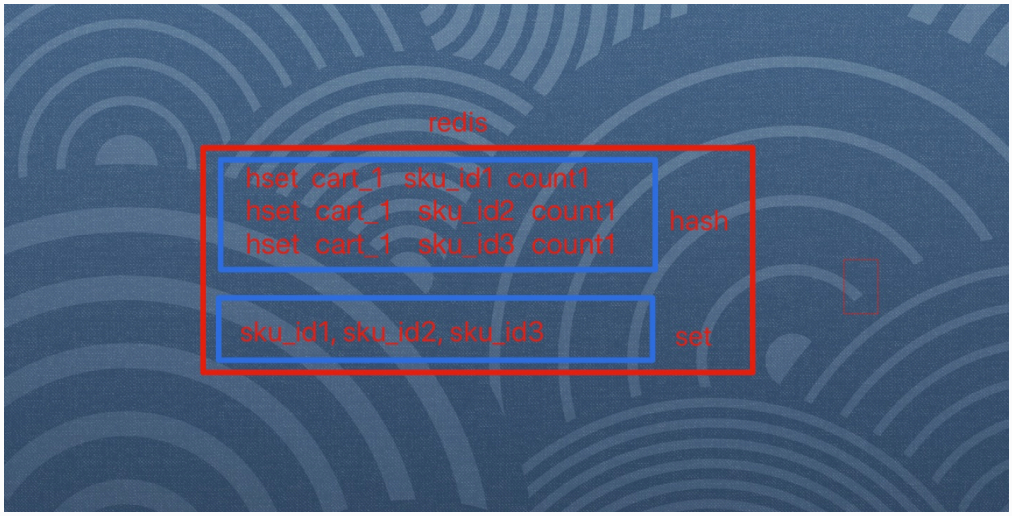
- 2, 模板渲染

```vue
{# 遍历浏览记录数据 #}
<li v-for="sku in histories">
    <a :href="sku.url"><img :src="sku.default_image_url"></a>
    <h4><a :href="sku.url">[[sku.name]]</a></h4>
    <div class="operate">
        <span class="price">￥[[sku.price]]</span>
        <span class="unit">台</span>
        <a href="#" class="add_goods" title="加入购物车"></a>
    </div>
</li>
```

- 3,js代码url拼接

```javascript
.then(response => {
    this.histories = response.data.skus;
    for(var i=0; i<this.histories.length; i++){
        this.histories[i].url = '/detail/' + this.histories[i].id; // + '.html';
    }
})
```

5,购物车存储设计

- 存储分析
  - 登陆用户
    - 存储在: redis
    - 存储的类型: hash, set
    - hash: 存放所有的购物车的数据
    - set: 存放需要结算的商品
    - 

  - 未登录用户
    - 存储在: cookie
    - 格式:

```
{
  sku_id1:{
    "count":10,
    "selected":True
  },
  sku_id2:{
    "count":10,
    "selected":True
  }
  ...

}
```

6,pickle

- 目的: 能够使用pickle将字符串(字典)和二进制数据之间进行相互转换
- 两个方法:

- bytes8 = pickle.dumps(dict)
- dict = pickle.loads(bytes8)
- 代码展示:

```
In [3]: import pickle

In [4]: a = pickle.dumps({"name":"zhangsan"})

In [5]: a

Out[5]: b'\x80\x03}q\x00X\x04\x00\x00\x00nameq\x01X\x08\x00\x00\x00zhangsanq\x02s.'

In [6]: b = pickle.loads(a)

In [7]: b

Out[7]: {'name': 'zhangsan'}
```

7,base64

- 目的: 是一种编码方式, 用来将8位的2进制数据, 和6位2进制数据之间进行相互转换

- 两个方法:
  - byte6 = base64.b64encode(byte8)
  - byte8 = base64.b64decode(byte6)
  - 代码表示:

```
In [3]: import pickle

In [4]: a = pickle.dumps({"name":"zhangsan"})

In [5]: a

Out[5]: b'\x80\x03}q\x00X\x04\x00\x00\x00nameq\x01X\x08\x00\x00\x00zhangsanq\x02s.'

In [6]: b = pickle.loads(a)

In [7]: b

Out[7]: {'name': 'zhangsan'}

In [8]: import base64
```

```
In [9]: c = base64.b64encode(a)




In [10]: c



Out[10]: b'gAN9cQBYBAAAAG5hbWVxAVgIAAAAemhhbmdzYW5xAnMu'

In [11]: d = base64.b64decode(c)



In [12]: d



Out[12]: b'\x80\x03}q\x00X\x04\x00\x00\x00nameq\x01X\x08\x00\x00\x00zhangsanq\x02s.'

In [13]: "name".encode()



Out[13]: b'name'

In [14]: b'name'.decode()



Out[14]: 'name'


```

8,添加购物车-类视图

- 目的: 能够编写类视图处理购物车校验的逻辑
- 操作流程:
  - 0,创建carts子应用
  - 1,根应用

```
1 url(r'^', include('carts.urls')),
```

  - 2,子应用

```
1 url(r'^carts/$',views.CartView.as_view())
```

  - 3,类视图

```
1  class CartView(View):
2      def post(self,request):
3          #1,获取参数
4          dict_data = 
   json.loads(request.body.decode())
5          sku_id = dict_data.get("sku_id")
6          count = dict_data.get("count")
7          selected = 
   dict_data.get("selected",True)
8          user = request.user
9
10         #2,校验参数
11         #2.1为空校验
12         if not all([sku_id,count]):
13             return 
   http.HttpResponseForbidden("参数不全")
14
15         #2.2判断count是否是整数
16         try:
17             count = int(count)
18         except Exception as e:
19             return 
   http.HttpResponseForbidden("购买的数量错误")
20
21         #2,2校验商品对象是否存在
```

```
        try:
            sku = SKU.objects.get(id=sku_id)
        except Exception as e:
            return http.HttpResponseForbidden("商品不存在")

        #2,3校验库存是否充足
        if count > sku.stock:
            return http.HttpResponseForbidden("库存不足")

        #3,判断用户状态
        if user.is_authenticated:

            pass
        else:
            pass

```

9,添加购物车-登陆用户

- 目的: 能够将登陆用户的数据添加到redis中
- 操作流程:
    - 1, 类视图

```
class CartView(View):
    def post(self,request):
        ...
        #3,判断用户状态
        if user.is_authenticated:
            #3,1获取redis对象
            redis_conn = get_redis_connection("cart")

            #3,2添加数据到redis

 redis_conn.hincrby("cart_%s"%user.id,sku_id,count)

            if selected:
```

```
 redis_conn.sadd("cart_selected_%s"%user.id,sku_id)

            #3,返回响应
            return http.JsonResponse({"code":RET.OK})
        else:
            pass

```

- 2, 前端点击代码添加
-

```
<div class="total">总价: <em>[[sku_amount]]元</em></div>
<div class="operate_btn">
    <a @click="add_cart" class="add_cart" id="add_cart">加入购物车</a>
</div>
</div>
```

10,添加购物车-未登陆用户

- 目的: 能够将未登录用户的数据添加到cookie中
- 操作流程:
  - 1, 类视图

```
class CartView(View):
    def post(self,request):
        ...
        else:
            #4,1获取cookie中的购物车数据
            cookie_cart = request.COOKIES.get("cart")

            #4,2判断,转换成字典
            cookie_dict = {}
            if cookie_cart:
                cookie_dict = pickle.loads(base64.b64decode(cookie_cart.encode()))

            #4,3累加count
```

```
            if sku_id in cookie_dict:
                count += cookie_dict[sku_id].get("count",0)

            #4,4设置新的数据
            cookie_dict[sku_id] = {
                "count":count,
                "selected":selected
            }

            #4,5设置cookie,返回响应
            response = http.JsonResponse({"code": RET.OK})
            cookie_cart = base64.b64encode(pickle.dumps(cookie_dict)).decode()

            response.set_cookie("cart",cookie_cart)

            return response

```

11,展示购物车界面

- 目的: 能够编写视图展示购物车界面
- 操作流程:
  - 1, 前端detail.html中添加跳转

```
<a href="user_center_info.html">用
<span>|</span>
<a href="/carts">我的购物车</a>
<span>|</span>
<a href="/static/user_center_order
```

  - 2,类视图

```
class CartView(View)
  ...
      def get(self,request):

        return render(request,'cart.html')
```

12,获取购物车-登陆用户

- 目的: 能够将登陆用户的购物车信息展示出来
- 操作流程:
  - 1, 类视图

```
    def get(self,request):

        #1,判断用户登陆状态
        user = request.user
        if user.is_authenticated:
            #1,获取redis数据
            redis_conn = get_redis_connection("cart")
            cart_dict = redis_conn.hgetall("cart_%s"%user.id)
            cart_selected_list = redis_conn.smembers("cart_selected_%s"%user.id)

            #2,拼接数据
            sku_list = []
            for sku_id,count in cart_dict.items():
                sku = SKU.objects.get(id=sku_id)
                sku_dict = {
                    "default_image_url":sku.default_image_url.url,
                    "name":sku.name,
                    "price":str(sku.price),
                    "amount":str(sku.price * int(count)),
                    "selected": str(sku_id in cart_selected_list),
                    "count":int(count)
                }
                sku_list.append(sku_dict)
```

```

            context = {
                "sku_carts":sku_list
            }
            #3,返回响应
            return render(request,'cart.html',context=context)
            pass
        else:
            pass
```

- 2, 模板代码直接拷贝使用

13,获取购物车-未登陆用户

- 目的: 能够获取未登录用户的购物车数据
- 操作流程:
  - 1, 类视图

```
    def get(self,request):
        ...
        else:
            #4,获取cookie中的数据
            cookie_cart = request.COOKIES.get("cart")

            if not cookie_cart:
                return render(request,'detail.html')

            #5,数据转换
            cookie_dict = pickle.loads(base64.b64decode(cookie_cart.encode()))
            sku_list = []

            for sku_id,count_selected in cookie_dict.items():
```

```
                sku = SKU.objects.get(id=sku_id)
                sku_dict = {
                    "default_image_url": sku.default_image_url.url,
                    "name": sku.name,
                    "price": str(sku.price),
                    "amount": str(sku.price * int(count_selected["count"])),
                    "selected": str(count_selected["selected"]),
                    "count": int(count_selected["count"])
                }
                sku_list.append(sku_dict)

            #6,返回响应
            context = {
                "sku_carts": sku_list
            }
            # 3,返回响应
            return render(request, 'cart.html', context=context)
```